		Exploring Aero				
		2005 Mathem				
Content and Achievement Standards North Dakota Mathematics						
	iatics					
Grade 5	0.1	0, 1				
Activity/Lesson	State	Standards				
Fundamentals of Aeronautics (145-176)	ND	MA.5.5.2.3	Identify the attributes of an angle and draw angles using protractors			
Fundamentals of Aeronautics (145-176)	ND	MA.5.5.3.6	Make predictions and draw conclusions based on data collected from a sample group			
Fundamentals of Aeronautics (145-176)	ND	MA.5.5.4.1	Estimate and measure length to the nearest eighth inch			
Fundamentals of Aeronautics (145-176)	ND	MA.5.5.5.1	Analyze patterns represented by tables and graphs			
Wings(177-208)	ND	MA.5.5.4.5	Select and use appropriate units when measuring length, area, and volume			
Airplane Control(209- 256)	ND	MA.5.5.2.3	Identify the attributes of an angle and draw angles using protractors			
The Resource Center	ND	MA.5.5.1.11	Compare equivalent fractions, decimals, and percents, e.g., 75/100 = .75 = 75%			
Science of Flight	ND	MA.5.5.3.6	Make predictions and draw conclusions based on data collected from a sample group			
Integrating with Aeronautics	ND	MA.5.5.1.12	Represent ratios and percents as parts of a whole using models and pictures			
Integrating with Aeronautics	ND	MA.5.5.5.1	Analyze patterns represented by tables and graphs			
Intro to Aeronautics (109-123)	ND	MA.5.5.3.6	Make predictions and draw conclusions based on data collected from a sample group			
Scientific Method(124-144)	ND	MA.5.5.3.6	Make predictions and draw conclusions based on data collected from a sample group			
		Exploring Aero	nautics			
		2005 Mathem				
Nowth Dologta Matter		ontent and Achievem	ent Standards			
North Dakota Mathem	Iatics					
Grade 6	0.1	01				
Activity/Lesson	State	Standards				
Fundamentals of Aeronautics (145-176)	ND	MA.6.6.2.1	Identify relationships between pairs of angles; i.e., adjacent, vertical, complementary, and supplementary			
Fundamentals of	IND	IVIA.U.U.Z. I	Collect and organize data, select and use an appropriate display; i.e., a frequency table, a line			
Aeronautics (145-176)	ND	MA.6.6.3.1	and bar graph			
Fundamentals of Aeronautics (145-176)	ND	MA.6.6.5.1	Identify and describe patterns represented by tables, graphs, and sequences			
Wings(177-208)	ND	MA.6.6.4.4	Distinguish among perimeter, area, surface area, and volume			

			Calcat appropriate tools and units to determine
			Select appropriate tools and units to determine
			the measurements needed for calculating
\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\	ND	NAA G G A F	perimeter, circumference, area, surface area,
Wings(177-208)	ND	MA.6.6.4.5	and volume Use formulas to determine the circumference
\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\	ND	NAA C C 4 C	and area of circles and the perimeter and area
Wings(177-208)	ND	MA.6.6.4.6	of triangles and parallelograms Use area formulas to determine the surface area
\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\	ND	NAA C C 4 7	
Wings(177-208)	ND	MA.6.6.4.7	of right prisms and square pyramids
			Collect and organize data, select and use an
Coionas of Flight	NID	MA.6.6.3.1	appropriate display; i.e., a frequency table, a line
Science of Flight	ND	IVIA.0.0.3. I	and bar graph
Coionas of Flight	ND	MAGGGG	Use experiments or simulations to determine
Science of Flight	טא	MA.6.6.3.3	probabilities
Integrating with	ND	NAA 6 6 1 14	Estimate the results of problems involving whole
Aeronautics	ND	MA.6.6.1.14	numbers, fractions, and decimals
Integrating with	ND		Make predictions based on trends identified in
Aeronautics	ND	MA.6.6.3.6	tables and graphs
Intro to Apropoution			Collect and organize data, select and use an
Intro to Aeronautics	ND	MA.6.6.3.1	appropriate display; i.e., a frequency table, a line
(109-123)	טא	IVIA.0.0.3. I	and bar graph Collect and organize data, select and use an
Cojentific Method/124			appropriate display; i.e., a frequency table, a line
Scientific Method(124-	ND	MA.6.6.3.1	and bar graph
144)	ND	IVIA.0.0.3. I	and bar graph
		Exploring Aero	nautics
		2005 Mathem	
	Co	ontent and Achievem	
North Dakota Mathem			lent Standards
North Dakota Mathem Grade 7			lent Standards
Grade 7	natics		lent Standards
		Standards	lent Standards
Grade 7 Activity/Lesson	natics		
Grade 7 Activity/Lesson Fundamentals of	natics State	Standards	Formulate a question; collect, organize, and
Grade 7 Activity/Lesson	natics State		
Grade 7 Activity/Lesson Fundamentals of	natics State	Standards	Formulate a question; collect, organize, and display data using a bar, line, and circle graph
Grade 7 Activity/Lesson Fundamentals of Aeronautics (145-176)	State ND	Standards	Formulate a question; collect, organize, and
Grade 7 Activity/Lesson Fundamentals of Aeronautics (145-176) Fundamentals of	State ND	Standards MA.7.7.3.1	Formulate a question; collect, organize, and display data using a bar, line, and circle graph Determine possible outcomes using organized lists, tree diagrams, or Venn diagrams
Grade 7 Activity/Lesson Fundamentals of Aeronautics (145-176) Fundamentals of	State ND	Standards MA.7.7.3.1	Formulate a question; collect, organize, and display data using a bar, line, and circle graph Determine possible outcomes using organized lists, tree diagrams, or Venn diagrams Make observations about relationships between
Grade 7 Activity/Lesson Fundamentals of Aeronautics (145-176) Fundamentals of Aeronautics (145-176)	State ND	Standards MA.7.7.3.1	Formulate a question; collect, organize, and display data using a bar, line, and circle graph Determine possible outcomes using organized lists, tree diagrams, or Venn diagrams Make observations about relationships between two- and three-dimensional figures; e.g., a cube
Grade 7 Activity/Lesson Fundamentals of Aeronautics (145-176) Fundamentals of	State ND ND	Standards MA.7.7.3.1 MA.7.7.3.2	Formulate a question; collect, organize, and display data using a bar, line, and circle graph Determine possible outcomes using organized lists, tree diagrams, or Venn diagrams Make observations about relationships between
Grade 7 Activity/Lesson Fundamentals of Aeronautics (145-176) Fundamentals of Aeronautics (145-176) Science of Flight	State ND ND	Standards MA.7.7.3.1 MA.7.7.3.2	Formulate a question; collect, organize, and display data using a bar, line, and circle graph Determine possible outcomes using organized lists, tree diagrams, or Venn diagrams Make observations about relationships between two- and three-dimensional figures; e.g., a cube is made with six squares Formulate hypotheses, conduct probability
Grade 7 Activity/Lesson Fundamentals of Aeronautics (145-176) Fundamentals of Aeronautics (145-176) Science of Flight Science of Flight	ND ND	MA.7.7.3.1 MA.7.7.3.2 MA.7.7.2.1	Formulate a question; collect, organize, and display data using a bar, line, and circle graph Determine possible outcomes using organized lists, tree diagrams, or Venn diagrams Make observations about relationships between two- and three-dimensional figures; e.g., a cube is made with six squares Formulate hypotheses, conduct probability experiments, and draw conclusions from results
Grade 7 Activity/Lesson Fundamentals of Aeronautics (145-176) Fundamentals of Aeronautics (145-176) Science of Flight	ND ND	MA.7.7.3.1 MA.7.7.3.2 MA.7.7.2.1	Formulate a question; collect, organize, and display data using a bar, line, and circle graph Determine possible outcomes using organized lists, tree diagrams, or Venn diagrams Make observations about relationships between two- and three-dimensional figures; e.g., a cube is made with six squares Formulate hypotheses, conduct probability
Grade 7 Activity/Lesson Fundamentals of Aeronautics (145-176) Fundamentals of Aeronautics (145-176) Science of Flight Science of Flight Integrating with	ND ND ND ND	MA.7.7.3.1 MA.7.7.3.2 MA.7.7.2.1 MA.7.7.3.3	Formulate a question; collect, organize, and display data using a bar, line, and circle graph Determine possible outcomes using organized lists, tree diagrams, or Venn diagrams Make observations about relationships between two- and three-dimensional figures; e.g., a cube is made with six squares Formulate hypotheses, conduct probability experiments, and draw conclusions from results Use ratios and proportions to represent
Grade 7 Activity/Lesson Fundamentals of Aeronautics (145-176) Fundamentals of Aeronautics (145-176) Science of Flight Science of Flight Integrating with Aeronautics	ND ND ND ND	MA.7.7.3.1 MA.7.7.3.2 MA.7.7.2.1 MA.7.7.3.3	Formulate a question; collect, organize, and display data using a bar, line, and circle graph Determine possible outcomes using organized lists, tree diagrams, or Venn diagrams Make observations about relationships between two- and three-dimensional figures; e.g., a cube is made with six squares Formulate hypotheses, conduct probability experiments, and draw conclusions from results Use ratios and proportions to represent relationships Describe how scale can make graphs, tables,
Grade 7 Activity/Lesson Fundamentals of Aeronautics (145-176) Fundamentals of Aeronautics (145-176) Science of Flight Science of Flight Integrating with Aeronautics Integrating with Aeronautics	ND ND ND ND ND ND	MA.7.7.3.1 MA.7.7.3.2 MA.7.7.2.1 MA.7.7.3.3 MA.7.7.1.1	Formulate a question; collect, organize, and display data using a bar, line, and circle graph Determine possible outcomes using organized lists, tree diagrams, or Venn diagrams Make observations about relationships between two- and three-dimensional figures; e.g., a cube is made with six squares Formulate hypotheses, conduct probability experiments, and draw conclusions from results Use ratios and proportions to represent relationships Describe how scale can make graphs, tables, and charts appear misleading
Grade 7 Activity/Lesson Fundamentals of Aeronautics (145-176) Fundamentals of Aeronautics (145-176) Science of Flight Science of Flight Integrating with Aeronautics Integrating with	ND ND ND ND ND ND	MA.7.7.3.1 MA.7.7.3.2 MA.7.7.2.1 MA.7.7.3.3 MA.7.7.1.1	Formulate a question; collect, organize, and display data using a bar, line, and circle graph Determine possible outcomes using organized lists, tree diagrams, or Venn diagrams Make observations about relationships between two- and three-dimensional figures; e.g., a cube is made with six squares Formulate hypotheses, conduct probability experiments, and draw conclusions from results Use ratios and proportions to represent relationships Describe how scale can make graphs, tables, and charts appear misleading Estimate a measurement to the degree of
Grade 7 Activity/Lesson Fundamentals of Aeronautics (145-176) Fundamentals of Aeronautics (145-176) Science of Flight Science of Flight Integrating with Aeronautics Integrating with Aeronautics Integrating with	ND ND ND ND ND ND ND ND ND	MA.7.7.3.1 MA.7.7.3.2 MA.7.7.2.1 MA.7.7.3.3 MA.7.7.1.1 MA.7.7.3.6	Formulate a question; collect, organize, and display data using a bar, line, and circle graph Determine possible outcomes using organized lists, tree diagrams, or Venn diagrams Make observations about relationships between two- and three-dimensional figures; e.g., a cube is made with six squares Formulate hypotheses, conduct probability experiments, and draw conclusions from results Use ratios and proportions to represent relationships Describe how scale can make graphs, tables, and charts appear misleading Estimate a measurement to the degree of precision that the tool provides
Grade 7 Activity/Lesson Fundamentals of Aeronautics (145-176) Fundamentals of Aeronautics (145-176) Science of Flight Science of Flight Integrating with Aeronautics Integrating with Aeronautics Integrating with	ND ND ND ND ND ND ND ND ND	MA.7.7.3.1 MA.7.7.3.2 MA.7.7.2.1 MA.7.7.3.3 MA.7.7.1.1 MA.7.7.3.6	Formulate a question; collect, organize, and display data using a bar, line, and circle graph Determine possible outcomes using organized lists, tree diagrams, or Venn diagrams Make observations about relationships between two- and three-dimensional figures; e.g., a cube is made with six squares Formulate hypotheses, conduct probability experiments, and draw conclusions from results Use ratios and proportions to represent relationships Describe how scale can make graphs, tables, and charts appear misleading Estimate a measurement to the degree of
Grade 7 Activity/Lesson Fundamentals of Aeronautics (145-176) Fundamentals of Aeronautics (145-176) Science of Flight Science of Flight Integrating with Aeronautics Integrating with Aeronautics Integrating with	ND ND ND ND ND ND ND ND ND	MA.7.7.3.1 MA.7.7.3.2 MA.7.7.2.1 MA.7.7.3.3 MA.7.7.1.1 MA.7.7.3.6	Formulate a question; collect, organize, and display data using a bar, line, and circle graph Determine possible outcomes using organized lists, tree diagrams, or Venn diagrams Make observations about relationships between two- and three-dimensional figures; e.g., a cube is made with six squares Formulate hypotheses, conduct probability experiments, and draw conclusions from results Use ratios and proportions to represent relationships Describe how scale can make graphs, tables, and charts appear misleading Estimate a measurement to the degree of precision that the tool provides Select and use appropriate tools and units to

Integrating with			Solve problems involving scale factors, using				
Aeronautics	ND	MA.7.7.4.5	ratio and proportion				
Intro to Aeronautics			Formulate a question; collect, organize, and				
(109-123)	ND	MA.7.7.3.1	display data using a bar, line, and circle graph				
Scientific Method(124-			Formulate a question; collect, organize, and				
144)	ND	MA.7.7.3.1	display data using a bar, line, and circle graph				
Scientific Method(124-			Formulate hypotheses, conduct probability				
144)	ND	MA.7.7.3.3	experiments, and draw conclusions from results				
		Exploring Aero	nautice				
2005 Mathematics Content and Achievement Standards							
North Dakota Mathematics							
Grade 8							
Activity/Lesson	State	Standards					
Activity/Lesson	State	Standards					
Fundamentals of			Collect, organize, and display data using scatter				
Aeronautics (145-176)	ND	MA.8.8.3.2	and stem-and-leaf plot				
7101011441100 (110 110)	110	100 0.0.0.2	and storm and roar plot				
Fundamentals of			Make inferences based on analysis of data and				
Aeronautics (145-176)	ND	MA.8.8.3.7	interpretation of graphs				
(**************************************			Use two-dimensional representations of three-				
			dimensional objects to visualize and solve				
			problems; e.g., those involving surface area and				
Wings(177-208)	ND	MA.8.8.2.8	volume				
J=(===)			Formulate a question and select a random or				
Science of Flight	ND	MA.8.8.3.1	representative sample				
Integrating with			Apply the Pythagorean Theorem to problems				
Aeronautics	ND	MA.8.8.2.4	involving right triangles				
Integrating with			Make inferences based on analysis of data and				
Aeronautics	ND	MA.8.8.3.7	interpretation of graphs				
Integrating with			Use variables, expressions and equations to				
Aeronautics	ND	MA.8.8.5.2	represent problem situations				
Scientific Method(124-			Formulate a question and select a random or				
144)	ND	MA.8.8.3.1	representative sample				
,	1	,					